



UA announces new nominees

*Institute committee chair
positions still available*

By Anne Cai
NEWS EDITOR

Nominees for UA officer positions were announced Monday evening. At a meeting this coming Tuesday, the UA Council will vote to officially appoint the nominees. Excluding the Chief of Staff, the nominees (see sidebar) were selected from an initial pool of about 40 students who applied for the 19 positions posted online at <http://re-invent.mit.edu/apply>, 20 of which were mostly interviewed by UA President Jonté D. Craighead '13 and Vice President Michael P. Walsh '13 in consultation with relevant committee members. The chief of staff's main responsibility is chairing the Nominations Committee, which includes "soliciting applications for representatives to Institute Committees, interviewing candidates, and selecting a slate of nominees," according to the UA Constitution.

"Given the urgent need for a chief of staff, we exclusively interviewed candidates with Institute Committee experience and conducted more in-depth interview with them," wrote Craighead to the UA Council Monday night in an email regarding nominations.

The chief of staff, treasurer, and secretary must be approved by a 2/3 vote of the UA Council at Tuesday's meeting, and the Finance Board chair must be approved by a majority vote. The remaining nominees for officers and committee chairs will be confirmed if fewer than five objections by Council Representatives against them are registered by Tuesday. If more there are more than five objections, the nominee will require approval by a majority of the Council vote. There is no reason to suspect the nominations will not be approved.

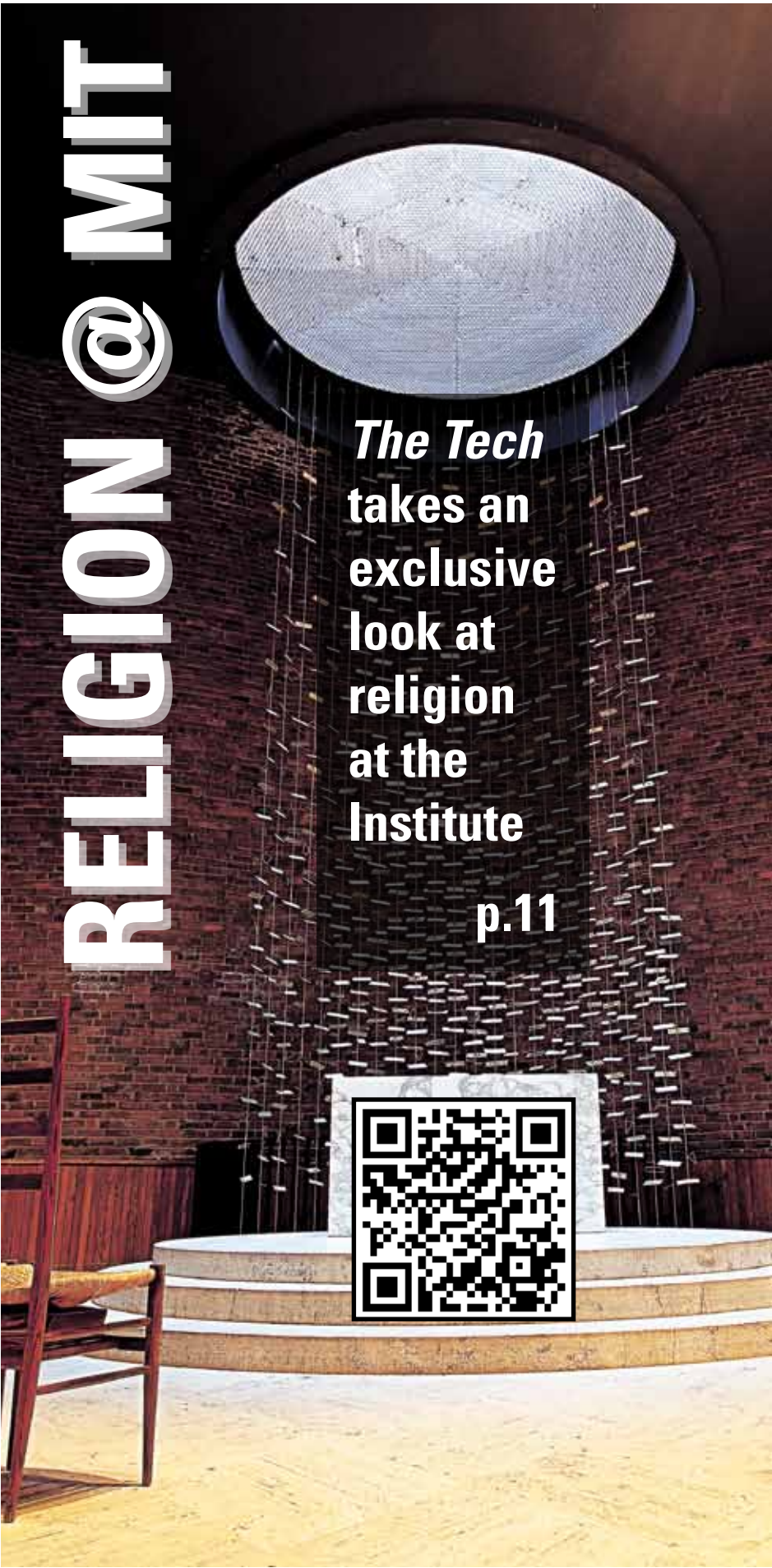
About nine of the originally advertised positions remain to be filled, and the UA plans to continue accepting applications.

"We are going to continue interviewing candidates from our application pool to find a place for everyone who was interested in a leadership position," wrote Craighead in an email to *The Tech*. Positions with no candidates as of yet may be left temporarily vacant "depending on the relative importance of the positions."

As the UA Council will not be in session during the summer, nominees selected after next Tuesday may be appointed by the president as acting officers and chairs as per the new UA Constitution, and they will undergo the same approval process at the first meeting when the Council reconvenes in the fall.

"Ideally, we would have preferred to have all of the nominations prepared [by the meeting]," wrote Craighead to the UA Council, "but given the lateness of elections, we are prioritizing quality candidates over hastened candidate reviews."

With an email sent to all undergraduates last night, the UA Nominations Committee, chaired by the chief of staff, has begun soliciting applications from students for Institute Committee positions, with a priority deadline of May 13 and a final deadline of May 18.



Maseeh, home of the arts

*Expressions event
series crosses the
art-science divide*

By Naina Mehta
STAFF REPORTER

Throughout March and April, Maseeh Hall hosted a series of events known as Expressions, which merged arts with the sciences. Expressions was comprised of three events — a Master's Tea, a lecture, and an art reception.

The first event of the series was the Master's Tea. The Tea, which will become its own ongoing program, is a series of informal meetings hosted in the housemasters' apartment for a limited number of students to meet and chat with a prominent figure or celebrity. The inaugural Master's Tea event during Expressions, attended by around 20 students, featured John Bohannon, a Science reporter famous for his "Dance Your PhD" presentations in a TED (Technology, Entertainment and Design) talk. The discussion focused on Bohannon's exploration of dance as an alternative to Power-Point slides as a way to relay scientific concepts.

"As soon as I watched John's TED video I was amazed and I RSVP'd," said Francisco X. Peña '15. "How often do I get to hang out with TED speakers?" Peña, a dancer, added that he found the idea of conveying messages through dance unique and interesting.

"John had us play a game where he listed the titles of different PhD theses and then showed us a clip from the dance, so we had to guess which clip matched to which title," said Katie L. Villa G, a Maseeh Graduate Resident Tutor (GRT). "He also talked a bit about his life and personal ca-

Maseeh, Page 21

IN SHORT

Ring Delivery for the Class of 2014 is today at the John Joseph Moakley Courthouse from 7 to 10 p.m.

Senior Ball for the Class of 2012 is Saturday at the Sheraton Boston hotel from 6:45 p.m. to midnight.

The MITWE Concert is tonight in Kresge Auditorium at 8 p.m. Tickets are free online at <http://mitwebutterflies5-11-12.eventbrite.com/> or \$5 at the door.

The Toy Product Design class(2.00B)'s PLAYsensation event is Tuesday at 7:30 p.m. in 10-250. Come see the final toy prototypes!

Send news information and tips to news@tech.mit.edu.

Nominees for 2012–2013 Undergraduate Association leadership

Principal Officers

Chief of Staff
Ravi M. Charan '14
Bexley Hall

Treasurer
George H. Bailey '14
Burton-Conner

Secretary
Christine M. Sowa '14
Maseeh Hall

Assistant Vice Presidents

Engagement & Member Development
Alec C. Lai '13
Next House

Sheila Lee '13
McCormick Hall

Institute Events & Events

Committee
Cara C. Brown '13
New House

Committee Chairs

Finance Board
Cory D. Hernandez '14
Senior House

Special Projects Committee
Amanda C. David '13
McCormick Hall
Anika Gupta '14
Bexley Hall

Athletics Committee
Stephen A. Freiberg '13
Burton-Conner

Sustainability Committee

Jennifer K. Liu '14
Burton-Conner

Working Group Chairs

Chair, MIT 2030
Patrick A. Hulin '14
East Campus

Chair, MITx
Timothy R. Jenks '13
Zeta Psi

THE INTERNET COMES TO MIT

ROFLCon returns to the Institute for its epic conclusion.
CAMPUS LIFE, p. 9

STUDENTS, GET INVOLVED!

The UA wants you for an Institute Committee! **LETTERS, p. 5**

POLITICIZING THE RAID

Does Obama take too much credit for Bin Laden's death? **OPINION, p. 5**



CLASS COMPETITION

2.007 and 1.013 end the semester with a final project showdown.
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BURTON/DEPP/ CARTER/ELFMAN

The classic quartet returns for *Dark Shadows*. **ARTS, p. 24**

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As Putin puts off meeting Obama, analysts consider future

By **Helene Cooper, Steven Lee Myers, and Ellen Barry**
THE NEW YORK TIMES

WASHINGTON — The first meeting between President Barack Obama and Russian President Vladimir V. Putin as the leaders of their respective countries was supposed to be an ice-breaker, a moment for two outsize figures to put behind them some of the friction that surrounded the Russian elections two months ago. But the announcement Wednesday that Putin would skip the Group of Eight summit meeting of world leaders next week at Camp David — a gathering that Obama had promoted as an opportunity to “spend time” with Putin — bewildered foreign policy experts in both countries who have been waiting to see how the two leaders would get on. During a phone call Thursday, Russia’s foreign minister, Sergey V. Lavrov, assured Secretary of State Hillary Rodham Clinton that the

cancellation was “not political,” a State Department official said. Other administration officials said they accepted Putin’s stated reason for canceling his trip — he told Obama that he had to finish setting up his new cabinet. In fact, during a meeting last week in Moscow with Obama’s national security adviser, Thomas E. Donilon, which was supposed to set up the Camp David meeting, Putin had warned that he might have to send his prime minister (and the former president), Dmitry A. Medvedev, in his place, according to a senior administration official with knowledge of the meeting. But wasn’t Medvedev supposed to be the one in charge of setting up the cabinet, Donilon asked. Putin, the official said, replied that while the prime minister would make the initial appointments, it was he, as president, who had to approve them. Putin promised to call Obama on Tuesday or Wednesday with his deci-

sion. And Wednesday, he did. “Not that there aren’t big fights going on in Moscow, but that he can’t come to the G-8 because of that, I completely do not buy,” said Andrew Kuchins, director of the Russia and Eurasia program at the Center for Strategic and International Studies. “It’s really bizarre. Oh, so the prime minister, who actually runs the cabinet, he can go to the G-8, but Putin can’t?” U.S. and Russian officials said the two men would meet in Mexico next month at the Group of 20 meeting. Irritants remain in relations between the countries, including the deployment of a missile defense system that Russia considers a threat, and Russia’s defense of President Bashar Assad of Syria. The abrupt change of plans, however, comes as U.S. and Russian officials appeared to be signaling that they were prepared for relations to get back to normal, after the anti-American rhetoric that characterized Putin’s campaign.

Chinese economy losing some of its sizzle, import growth halts

By **Keith Bradsher**
THE NEW YORK TIMES

HONG KONG — As China’s leaders have been preoccupied with a political struggle leading up to a once-in-a-decade leadership change this autumn, there are increasing signs that the Chinese economy may be running into trouble. China announced Thursday that growth in imports had unexpectedly come to a screeching halt in April — rising just 0.3 percent from the same period a year earlier, compared with expectations for an 11 percent increase. Businesses across the country appeared to lose much of their appetite for products as varied as iron ore and computer chips. China has been the largest single contributor to global economic

growth in recent years, and a sustained slowdown in its economy could pose problems for many other countries. Particularly exposed are countries that export commodities like iron ore and oil and rely on demand from China’s steel mills and ever-growing ranks of car owners. Exports, a cornerstone of China’s economic growth over the past three decades, grew 4.9 percent last month — half as much as economists had expected. And a slump in new orders over the past month at the Canton Fair, China’s main marketplace for exporters and foreign buyers, suggests that overseas shipments by the world’s second-biggest economy, after that of the United States, may not recover quickly. Growth in other sectors appears to be slowing, too, particularly in real estate. Soufun Holdings, a

Chinese real estate data provider, released figures Monday showing that residential land sales in the country’s 20 largest cities had fallen 92 percent last week from the week before, as declining prices for apartments have left developers short of cash and reluctant to start further projects. In a series of interviews over the past week, bankers and senior executives from provinces all over China, in a range of light and heavy industries, cited a broad deterioration in business conditions. Two of them said that some tax agencies in smaller cities had been telling companies to inflate their sales and profits to make local economic growth look less weak than it really was, while reassuring the companies that their actual tax bills would be left unchanged.

Afghan police forces deflect Taliban attack on governor

KABUL, Afghanistan — An attack by six Taliban infiltrators in the eastern province of Paktika on Thursday killed three police officers but was put down before it reached the government offices that were its target, Afghan officials said. The fighting again put the spotlight on the Afghan Local Police force, which is trained by U.S. special operations personnel and is seen as a critical hedge against the Taliban as Western forces begin withdrawing. The Local Police force, which was part of the response to the Paktika attack, has been the focus of intensified Taliban assaults as the annual fighting season has gotten under way. The attack began when six gunmen wearing explosive vests under Local Police uniforms tried to pass through a security checkpoint near the district governor’s building. Police forces stopped the men to question them, and a gun battle broke out, eventually stretching to two hours before the last attacker was killed. Two attackers detonated their explosives during the fight, but no civilians were hurt. Two members of the Afghan Local Police and one member of the national police force were killed. —Graham Bowley, *The New York Times*

Pentagon stresses efforts to recover US soldier

WASHINGTON — The U.S. government is doing everything possible to locate Sgt. Bowe Bergdahl, who is being held captive by insurgents after being seized in Afghanistan in 2009, the Pentagon’s top civilian and military leaders said Thursday. “Our heart goes out to the Bergdahl family,” Defense Secretary Leon E. Panetta said. “We share the concerns about Bergdahl and the importance of getting him returned. And we’re doing everything possible to try to see if we can make that happen.” Joining Panetta at a news briefing, Gen. Martin E. Dempsey, chairman of the Joint Chiefs of Staff, said the family of the 26-year-old sergeant had been to his office to discuss the efforts that remain under way. “I can assure you that we are doing everything in our power, using our intelligence resources across the government, to try to find, locate him,” Dempsey said. Their comments came after the Bergdahl family broke a yearlong silence to disclose that Bergdahl, the only U.S. soldier held captive by the insurgents, is a part of secret negotiations between the Obama administration and the Taliban over a proposed prisoner exchange. —Thom Shanker, *The New York Times*

JPMorgan Chase loses \$2 billion from trades

JPMorgan Chase, which emerged from the financial crisis as the nation’s biggest bank, disclosed Thursday that it lost more than \$2 billion in trading, a surprising stumble that promises to escalate the debate over whether regulations need to rein in trading by banks. Jamie Dimon, the chief executive of JPMorgan, blamed “errors, sloppiness and bad judgment” for the loss, which stemmed from a hedging strategy that backfired. The trading roiled markets a month ago, when rumors started circulating of a JPMorgan trader in London whose bets were so big that he was nicknamed “the London Whale” and “Voldemort,” after the Harry Potter villain. For a bank that earned nearly \$19 billion last year, the trading loss, which could go higher, will not cripple it in any way. Still, it demonstrates how a market blunder can shake even a financial giant that celebrates its “fortress balance sheet.” —Jessica Silver-Greenberg and Peter Eavis, *The New York Times*

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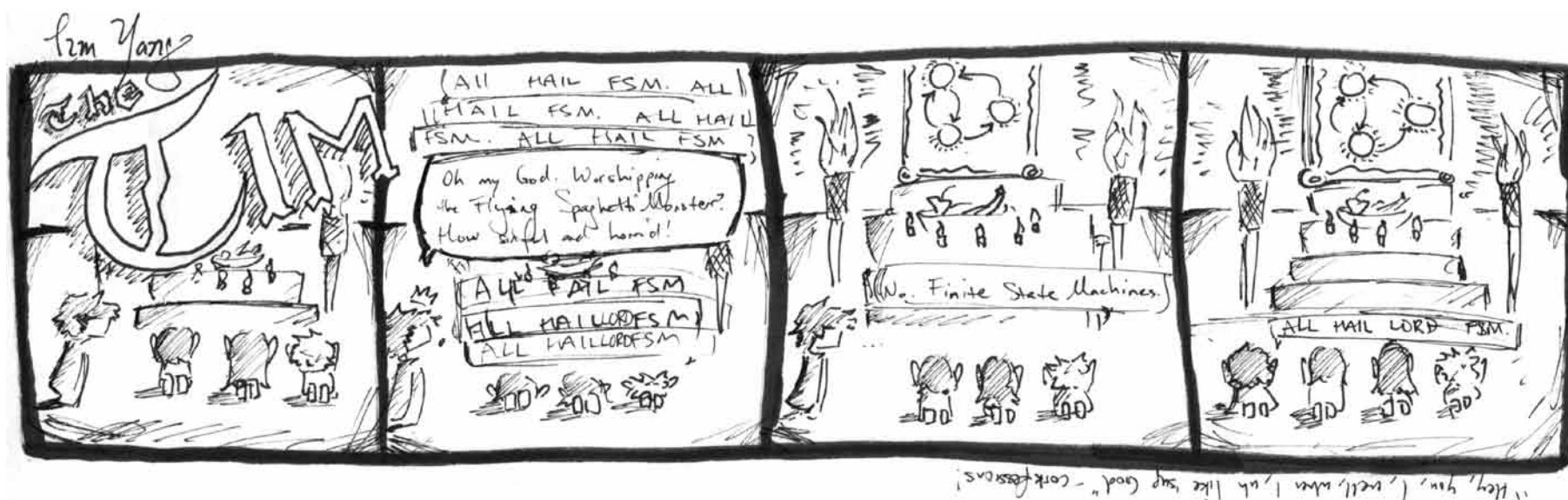


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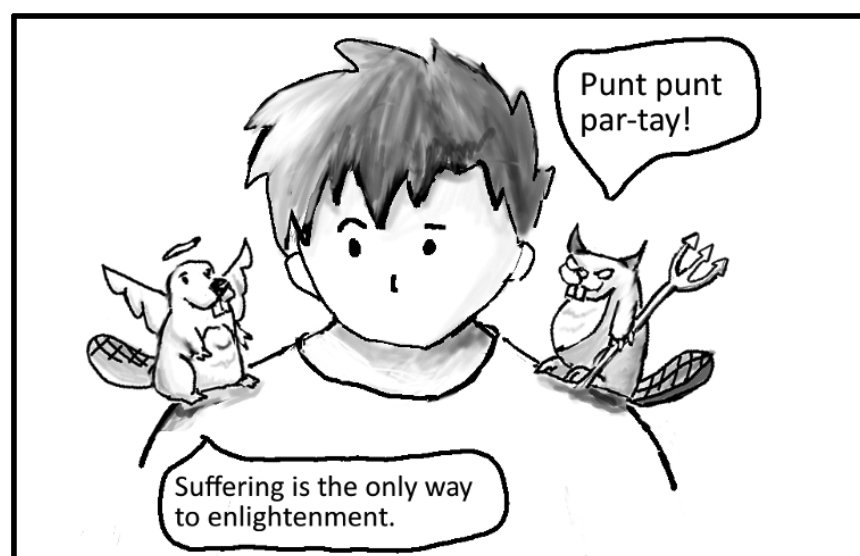


WE DO CALCULUS BY PAELLE POWELL MAY 2012 Cooties!



...WE ARE SO CUTE TOGETHER IT MAKES ME SICK.

Beaver Tails by Ranbel Sun



instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Sudoku

Solution, page 10

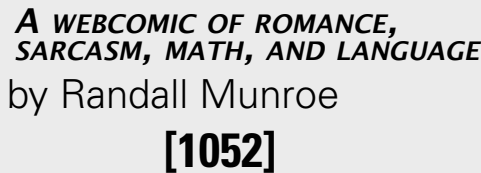
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Techdoku

Solution, page 10

420×		20+			6+	6
	1		24×			3
	42×			12×		1
280×		19+				7
6×				20+		4
		5×			2−	
6×		3−			2−	

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.



TO THE TUNE OF GILBERT & SOLLIVANS
MODERN MAJOR-GENERAL SONG
 (WHICH YOU MAY KNOW FROM TOM LEHRER'S *ELEMENTS*,
 IF NOT, JUST HUM *SUPERCAULFRAGILISTICEXPIALIDOCIOUS*)

I'D RATHER EAT A FOWLER'S TOAD THAN MAJOR IN BIOLOGY,



RABBIT?

I.T. PREPARES YOU FOR
A LIFE OF FIGHTING
WITH PCs NONSTOP.

AS PRATCHETT SAID,
"GEOGRAPHY'S JUST PHYSICS
SLOWED WITH TREES ON TOP."

ASTRONOMERS ALL CRINGE WHEN THEY HEAR "SUPERMOON" OR "ZODIAC."

AGRONOMY'S A NO-GO; I'M A HUGE AGOROPHOBIC.

I

BY DUBBING ECON
"DISMAL SCIENCE"
ADHERENTS EXAGGERATE;

THE "DISMAL'S FINE—IT'S
"SCIENCE" WHERE THEY
PATENTLY PREVARICATE.

A BA IN COMMUNICATIONS
GUARANTEES THAT
YOU'LL ACHIEVE



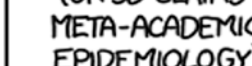
A stick figure wearing a graduation cap and gown, standing against a plain white background.

I RECOGNIZE MY FOUR-YEAR PLANS AT THIS POINT NOT REPAIRABLE,

BUT PUT ME DOWN AS "UNDECIDED"—EVERY MAJOR'S TERRIBLE.

TV'S BEHIND THE
RUSH INTO FORENSIC
CRIMINOLOGY

(OR SO CLAIMS
META-ACADEMIC
EPIDEMIOLOGY).



IN TERMS OF CHOICES, I'D SAY ONLY SOPHIE'S WAS COMPARABLE.

JUST PUT ME DOWN AS "UNDECIDED" - EVERY MAJOR'S TERRIBLE!

Someday I'll be the first to get a Ph.D in 'Undeclared'.

CONVENTION REVIEW

I can has Internet?

The final ROFLcon features memes, activism, commercialism, and nostalgia

By Stephen Suen

Last weekend, the biggest names in Internet fame, academia, and entrepreneurship descended upon MIT for the third installment of ROFLCon, a biennial celebration of web culture. From accidental celebrities such as Scumbag Steve and Chuck Testa to researchers like hacker anthropologist Biella Coleman and MIT’s own Ethan Zuckerman, a diverse cast of guests came together to unite under the common banner of “the Internets.” Prior to the keynote speech, event co-founder Christina Xu put it succinctly: “One out of eight people in this room has done something crazy on the Internet.”

In his opening address on Friday morning, keynote speaker Jonathan Zittrain of Harvard Law School sympathized with conference attendees, “It’s hard to explain what you’re doing this weekend to friends and family who are not part of this tribe.” But with the diversity of subcultures on the Internet — one of the fundamental affordances of online networks — is it really accurate to condense all of them into a single tribe?

At its very core, this year’s ROFLCon was an attempt to wrestle with the Internet’s ongoing identity crisis, to try and find some unifying theory bringing together the disparate strands that characterize the state of the Internet today: the hacktivism of Anonymous, the meteoric cultural rise and commercialization of Internet memes, debate over real-names policies and other privacy concerns, the Arab Spring and other international revolutions, radically new business and content distribution models, and the ongoing battle over copyright and cyber-security bills such as SOPA, ACTA, and most recently CISPA.

At its very core, this year’s ROFLCon was an attempt to wrestle with the Internet’s ongoing identity crisis, to try and find some unifying theory bringing together the disparate strands that characterize the state of the Internet today.

Certainly, a good number of the panels at ROFLCon were not that serious in nature and instead focused on showcasing different aspects of Internet culture. The “Global Lulzes” panel, for example, celebrated Internet memes from other parts of the world — namely, China, Brazil, and Syria. Saturday’s keynote speech chronicled the history of supercuts: fast-paced video montages of clips from film and TV, usually of a specific cliché or trope.

Several of the panels at ROFLCon focused on niche interests. The webcomic community was proudly represented by the artists of *Axe Cop*, *Cyanide & Happiness*, *Diesel Sweeties*, *Explodingdog*, *Loldwell*, and *SMBC*. One panel, dedicated to the sub-genre of sadistically-difficult video games, featured the developers of running simulator *QWOP* and “masocore” platformer *I Wanna Be The Guy*. Another panel was dedicated to fangirl culture in general, bringing together some of the biggest names in the

fanfiction and fanart circles. Other panels were simply fanservice — such as a solo panel with Internet creator Neil Cicierega, probably best known for his work on “Potter Puppet Pals.” The panel featuring Wieden+Kennedy’s Craig Allen — the creative director behind the “Man Your Man Could Smell Like” Old Spice ad campaign — ultimately became a Skype video Q&A with actor Isaiah Mustafa himself.

Despite the huge diversity of subcultures and fandoms represented at ROFLCon, certain recurring themes were felt throughout the conference. For one, multiple speakers mentioned the dark side of being Internet famous. In his talk, Zittrain proposed the creation of an infrastructure that would allow people to “opt out” of the sometimes-unwelcome celebrity of memedom.

The Advice Animal panel — featuring Scumbag Steve and representatives from meme database Know Your Meme — took an unexpected turn when the discussion led to the ethics of the “I Can Count to Potato” macro, which features the image of a girl with Down syndrome. In response, Know Your Meme proposed creating guidelines to help the subjects of memes (and in this case, their parents) make good choices about how to respond to unintended Internet fame.

On the other hand, using memes to ridicule was also lauded as an effective political tool — Zittrain brought up how the Downfall parodies have transformed Hitler into a comedic character, while MIT Center for Civic Media director Ethan Zuckerman half-jokingly suggested the creation of a Scumbag Assad image macro to poke fun at Syria’s current president. Indeed, the intersection of the Internet and politics was another overarching theme throughout ROFLCon.

For example, on the “LOLitics” panel, Mozilla’s Dan Sinker described his experience running the @MayorEmanuel Twitter account, through which he told a distorted version of Rahm Emanuel’s campaign for Mayor of Chicago. Latoya Peterson, editor of the blog Racialicious, discussed the “Shit X Says” meme, its permutations, and how it can be subverted for activist ends, as seen in “Shit Cis People Say to Trans People” or “Shit Everybody Says to Rape Victims.” McGill University professor Biella Coleman discussed Anonymous and popular misrepresentations of the hacktivist organization, analyzing its interactions with the surveillance state.

In his solo panel, Ben Huh, CEO of I Can Has Cheezburger, also discussed intellectual property and how today’s restrictive copyright paradigm is hindering the meme ecosystem and content creation at large. Even the closing panel of the convention, “Defending the Internet,” revolved around



CHRISTOPHER A. MAYNOR—THE TECH

Meme-related products are displayed for sale at last Friday’s ROFLCon III. Special guests at the “Internet culture conference” included Alan Schaaf, founder of Imgur, and Blake Boston, also known as “Scumbag Steve.”

the recent slew of Internet-related bills such as SOPA and PIPA. The panel of Internet superstars — including Reddit co-founder Alexis Ohanian and Yale cyberlaw professor Elizabeth Stark — discussed how Internet policy decisions are made, and how that process needs to be improved.

Amidst these themes running throughout the conference, however, I noticed none more strongly than the collective sinking feeling that the Internet has jumped the shark. In the webcomics panel, *Diesel Sweeties* artist R. Stevens waxed nostalgic for the smaller, more intimate communities of the early Internet. In reference to Cheezburger’s perceived commercialization of Internet culture, a heckler at Ben Huh’s panel asked, “Why are you raping the Internet, sir?”

The fading YouTube celebrities on the “Channels Killed the (Internet) Video Star” bemoaned how a new industry of web content production has eroded the serendipitous spirit of early YouTube. Judson Laipply’s “Evolution of Dance” video lost its spot on the YouTube Top 20 list to a Vevo music video, and — paraphrasing Matt Harding of the video series “Where the Hell is Matt?” — the medium has already been co-opted by marketers.

4chan creator Christopher Poole, better known by his online handle “moot,” mentioned in his panel that Internet memes — once a small niche of the web — are now everywhere; today net culture does not exist as something separate. “Anyone who has a computer now experiences net culture. Advice Dog is almost the refined sugar of memes: it’s fine, it tastes good, but it’s not good for you.”

According to Poole, the ubiquity of memes has deprived them of richness. As emphasized during the panel on NanoFame, memes have now been distilled to the tiniest slivers of content — a few seconds of video, a single image. Today, they come and go faster than ever. Thus, it comes as no coincidence that this was the last RO-

FLCon (for now), as the “surprise ending” of the event program — styled as an old-school choose-your-own-adventure book — reveals.

“It’s been an amazing run — more stupendously successful than we ever could have possibly imagined for now, we’re putting this trilogy to bed and riding out into the sunset. Our lives are taking us to new and exciting places, so ROFLCon is on hiatus until we can figure out how to continue doing it great justice,” went the pamphlet.

So, did ROFLCon achieve its goal? Was it successful in its quest to resolve the Internet’s existential crisis?

No, I don’t think so. The Internet has grown far too big and far too fragmented to be tamed, and our attempts to understand it asymptotically approach but never quite reach that unifying theory. Perhaps the discourse surrounding the Internet has become as saturated as the Internet itself, and all ROFLCon could do was implode on itself.

In the blue fanny packs given out to each attendee — mingled with the Goatse-themed ROFLCondoms and the limited edition holographic Nyan Cat pins — were stickers and other trinkets from companies specializing in predicting soon-to-be “viral” content or claiming to be able to reproduce similar rates of proliferation. Like the Internet it celebrates, ROFLCon, too, appears to have been co-opted by the marketers.

Despite the great victories (epic wins, rather) of the Internet and its vast potential to effect change and mobilize people, it is — like everything else that humankind has ever loved — being eaten up by commercial interests. That’s why ROFLCon needs to die. With the way we are now, we can only shrug as Keyboard Cat plays it off. We can only hope that the convention will return one day — as something better — to save the Internet from itself.

For now? I’ll be the first to say it: Goodnight, sweet prince.



vs



vs



vs



vs

Have a burning desire to see these teams battle it out? In person?!

Join *The Tech!*
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Solution to Sudoku									
from page 7									
2	4	1	7	5	8	3	9	6	
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5	9	2	4	8	1	7	6	3	
1	2	4	8	7	5	6	3	9	
6	7	8	1	9	3	4	2	5	
9	3	5	6	4	2	8	1	7	

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from page 7									
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from page 6									
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TURNST		TURTLE		ADO					
IDID		ARK		LABRAT					
PELOSI				CITE					
		OLD		CHESTNUT					
TASER		IRAS		TONE					
ASONE		SOS		DEVIL					
LINT		AMOS		ORATE					
LAYING		ANEGG							
		COIL		ASSIST					
EXPERT		MAR		ALTI					
FBI		MAGIC		BULLET					
AOL		ATONE		SEGAL					
XXL		LEVIS		SMOKE					



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Massage 101

Saturday March 12th

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Come with a friend and learn how to give a chair massage from a professional instructor.



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RELIGION AT MIT

At an Institute so grounded in science and technology, where do faith and spirituality fit in?

MIT isn't famous for being a god-fearing place. Few people know that there are 16 chaplains and nearly 30 student groups dedicated to religion at the Institute. So why are they here?

Last week, *The Tech* surveyed 2,943 undergraduate and graduate students at MIT — about 27 percent of the student population — on their religious life. 1,295 (44 percent) were undergraduates.

We looked at more than just religious affiliation and belief in a higher power. We asked about attendance at religious services, membership in religious student groups, and changes in faith. We studied how religion influences your opinions on sex, science, and politics. We interviewed Robert M. Randolph, chaplain to the Institute, who doubles as the Bexley housemaster; philosophy professor Alex Byrne, who had a lot to say about atheism at MIT; as well as religious group leaders and a number of students. We even spoke with one of the organizers behind all of those TGBSM posters.

In addition, our special section on religion includes a discussion between our opinion writers on the roles of science and religion. Our arts department explores religious a capella groups at the Institute, and examines *The Atheist's Guide to Reality: Enjoying Life without Illusions*, a recent book by Alex Rosenberg.

Our feature also highlights stories and thoughts from the community about religion at MIT. These comments were drawn from the free response section at the end of our survey.

MIT is full of great diversity, and religion is no exception. We hope you enjoy reading about the religious life at the Institute!

Maggie Lloyd '12 and Jessica J. Pourian '13
Contributing Editor and Editor in Chief

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Chaplain, housemaster, and adviser offers a perspective on religion and spirituality at the Institute

Chaplain, housemaster, and adviser offers a perspective on religion and spirituality at the Institute

CONTRIBUTING EDITOR

Robert Randolph: That's a good question. Part of what the chaplain does is manage this happy group of professionals. There are 16 chaplains on MIT's campus and we built this building [WIL, the Religious Activities Center] in 1995. We made a decision to bring together all the religious communities at MIT and the chaplains that are here are people who are supported by particular religious traditions.

Robert Randolph: That's a good question. Part of what the chaplain does is manage this happy group of professionals. There are 16 chaplains on MIT's campus and we built this building [WIL, the Religious Activities Center] in 1995. We made a decision to bring together all the religious communities at MIT and the chaplains that are here are people who are supported by particular religious traditions.

When they asked me one night five years ago to become the chaplain to the Institute, that was one of the challenges, to make sure the playing field was level for everybody, that folks get along and that they learn from each other. The rationale for building this building and for us having everyone here was we wanted people to learn about the other, the stranger, the one they didn't know about while they were in college.

TT: At ceremonies where you give the opening prayer, such as commencement, how does that work to keep it non-denominational?

RR: I recognize that the community I'm speaking to has a varied spectrum. I always write my prayers in advance for graduation and make sure that in some ways it's "to whom it may concern." I try to say words that become what they need to become for the people hearing them. That is, if they can be challenging and maybe comforting or uplifting even to those that don't consider themselves religious. These days, a lot of people say, "I'm spiritual but I'm not particularly religious," which means that they're not

TT: A little bit after you had been appointed as chaplain, Professor Joe Halde-
man wrote in a letter to *The Tech* on January
9, 2008 titled “MIT Does Not Need a Chap-
lain” that asked why does MIT even need a
chaplain, being a secular institution? (“Our
students, especially the ones from America,
have grown up in cultures saturated with re-
ligiosity. We should give them a little break
from it while they’re here. MIT needs reli-
gion like a bull needs mammaries,” Halde-
man wrote.) What do you say to people con-
fused about the need for a chaplain on our
campus?

‘The problem is, it’s not a secular institution. The truth is, for 18- to 22-year-olds, one of the issues on the table is who am I? What am I about?’

TT: What is it like to also be a housemaster and an advisor along with your duties as chaplain?

I became a housemaster for a year initially but I kept getting re-upped. Even in Bexley over the time I've been there I've had students who had regular religious gatherings inside the dormitory. My job is not to

RR: It ebbs and flows...We just put in place this new Kosher dining program; it's something we've been working on for 20 years. It's going to make an important difference for Jewish students and for Muslim students and for dialogue between the two communities, as they convene over food. Again, who would have thought that food suddenly becomes a way to promote world peace or at least understanding?

Now, one of the things we've done recently is meeting in the chapel on Tuesday mornings not for religious reasons but just to reflect together and to draw from the traditions that people bring. We do that partly because one of the things about this place is that we're so harried that we don't take time sometimes to reflect. It turns out that instead of being for students it is a time more for faculty and staff. For 20 minutes we come together, there's a presentation, there's some music, there's centering, and we have coffee. When in doubt, eat. It runs from 10 to 15 [attendees]. It's not large.

RR: Yeah, I think the reason why is that for example the Tech Catholic Community, the Muslim community, Hillel all draw from broad, worldwide bases. So, you can be Catholic and come from Great Britain, you can come from Mexico, you can come from Latin America, and one of the things I've always argued is that if you want to see diversity at MIT you should look at the religious communities. You'll see people from all over the world.

When we had the Cardinal [Sean O'Malley, a Roman Catholic counselor to the pope] here a few years ago, the line to greet him included students, faculty, and

TT: Our survey results show that about seven percent of freshmen and sophomores but about 14 percent of juniors and seniors say they dropped their religion since coming to MIT. What kind of influences are there at

‘The rationale for us building [W11] and for us having everyone here was we wanted people to learn about the other, the stranger, the one they didn’t know about.’

RR: Well, I don't think it's just at MIT. Trying to find your way in the world, you tend to focus on those things that seem to be the most pressing. The most pressing may well not be your religious commitments, which tend to come back when you have family, you have children, you begin to become more comfortable in your job. You know around here, a lot of people don't have time to eat, I mean that's just a fact. I've had people who come here and they used to play the cello a great deal and they gave it up and it breaks my heart. I wish they didn't feel they had to but then again I don't know what it's like to deal with some of these problem sets. I hope that eventually they'll come back to the cello, and so with their religious inclinations and when they come back to it they'll ask questions in a more sophisticated and thoughtful way.

Often religion is thought of when you're 18 as people telling you what not to do. The key is to understand that religious communities really ask a range of questions about what to do not what not to do.

What also happens when you're a college sophomore, college junior is you may for the first time encounter issues of life, death, mortality, fragility of human relationships. The resources that you draw on may be diverse but very often they'll be the resources that shaped you when you were younger and by the time you're 30 then you may come back to asking different questions about these things.

In an interview with The Tech, Chaplain to the Institute Robert M. Randolph said “If you want to see diversity at MIT you should look at the religious communities.” Like any multidimensional topic, religion is a broad subject that cannot be adequately covered by a few simple questions. We relied on the US census for a list of religious affiliations, but even that doesn’t offer a comprehensive list of all the possible beliefs represented on this campus. We understand that this matter is not black and white — as will be the case in any survey, respondents are severely limited by the options in each question. We kept this in mind while evaluating all of our data and reading through your comments. Nevertheless, this special section of The Tech illustrates an important aspect of student life that is not often discussed over psets or meals at the dining halls.

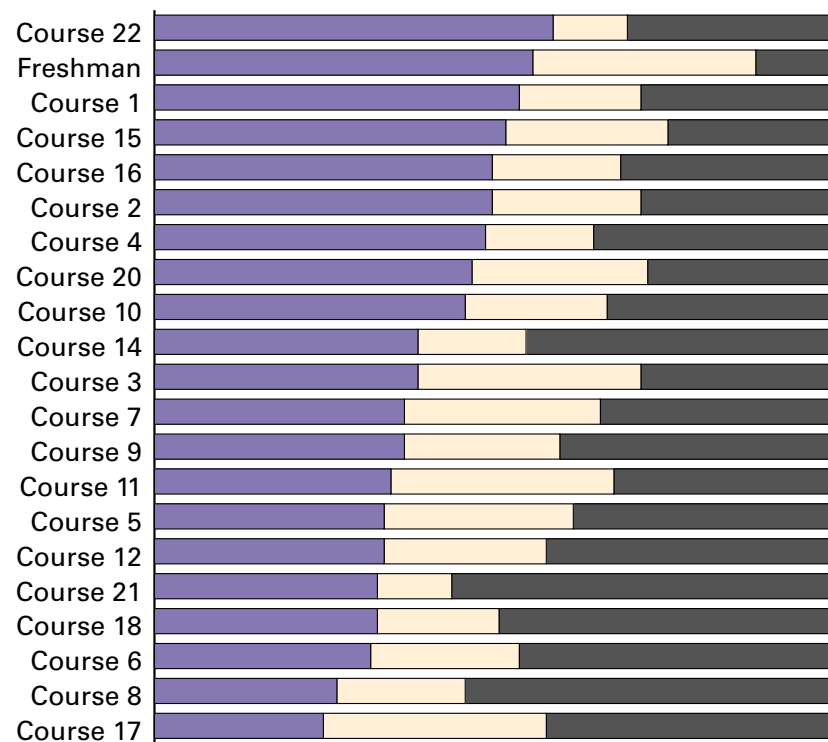


BY MAJOR

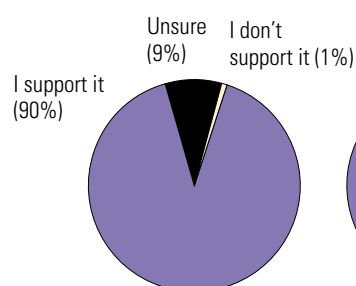
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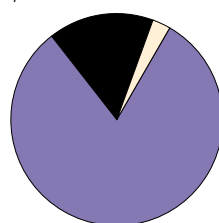
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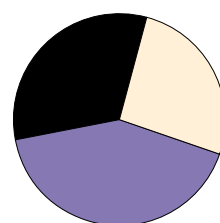
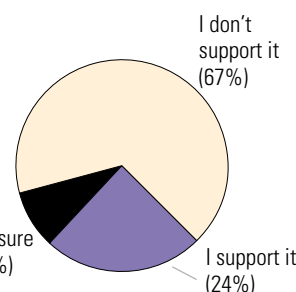
Stem cell research



NOT RELIGIOUS



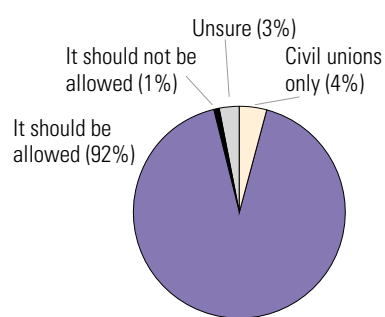
RELIGION HAS
NO INFLUENCE

RELIGION HAS
SOME INFLUENCE

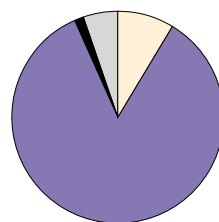
RELIGION HAS A STRONG INFLUENCE

Overall, 75 percent of respondents support stem cell research. According to the data, those who say that religion has a strong influence on their views on stem cell research are more likely to not support it, while those who identified as not religious are much more likely to support stem cell research.

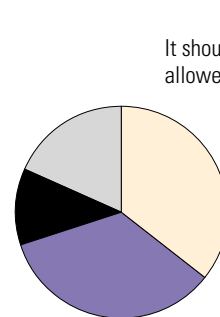
Same-sex marriage



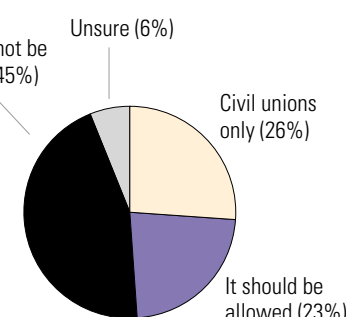
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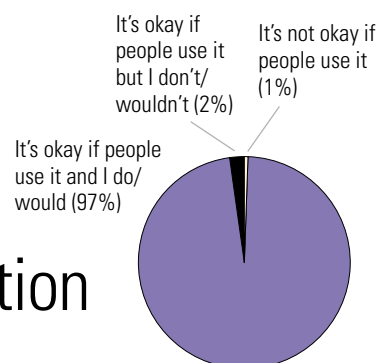
RELIGION HAS
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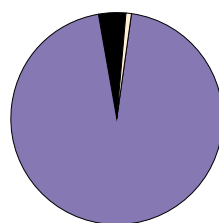
RELIGION HAS A STRONG INFLUENCE

Those who identify as not religious are more likely to be supportive of same-sex marriage, while those who say that religion has a strong influence on their views on same-sex marriage are more likely to be against same-sex marriage or believe that civil unions should replace marriages for same-sex couples.

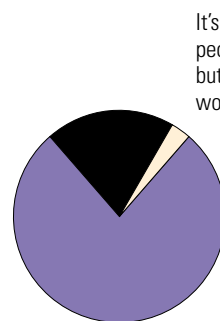
Contraception



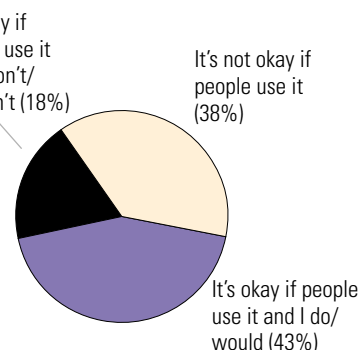
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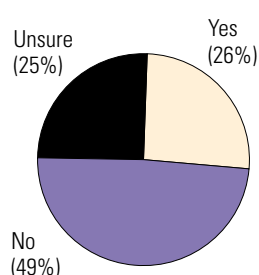
RELIGION HAS
SOME INFLUENCE



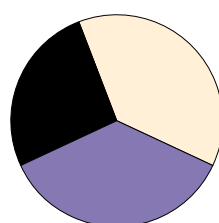
RELIGION HAS A STRONG INFLUENCE

When conditioning responses to questions on the use of contraception, respondents were more likely to say they were OK with the use of contraception if they reported that religion had little influence on their views on contraception use.

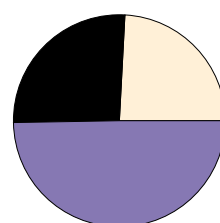
In favor of
the death
penalty



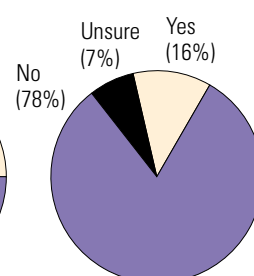
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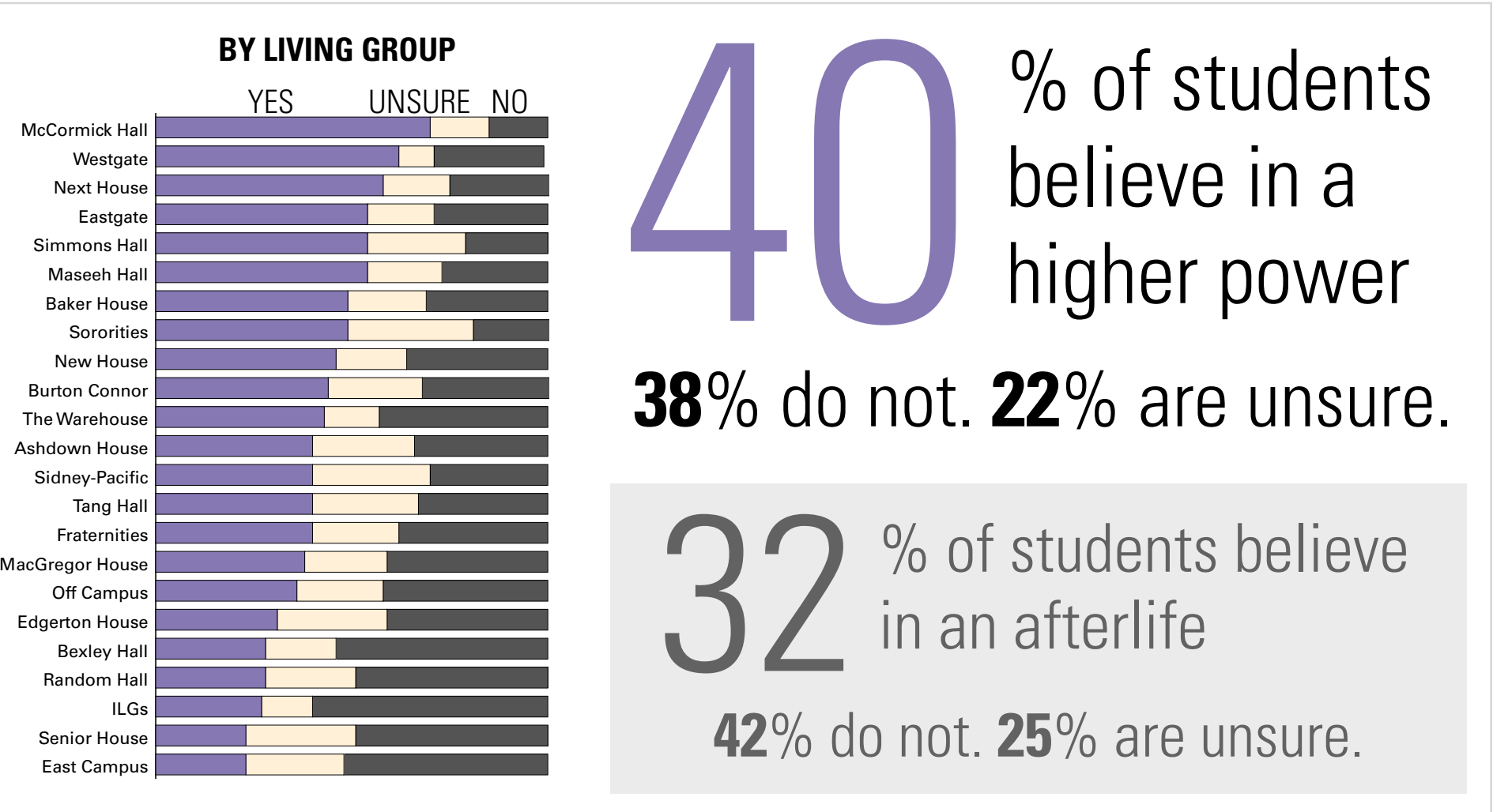


RELIGION HAS
SOME INFLUENCE

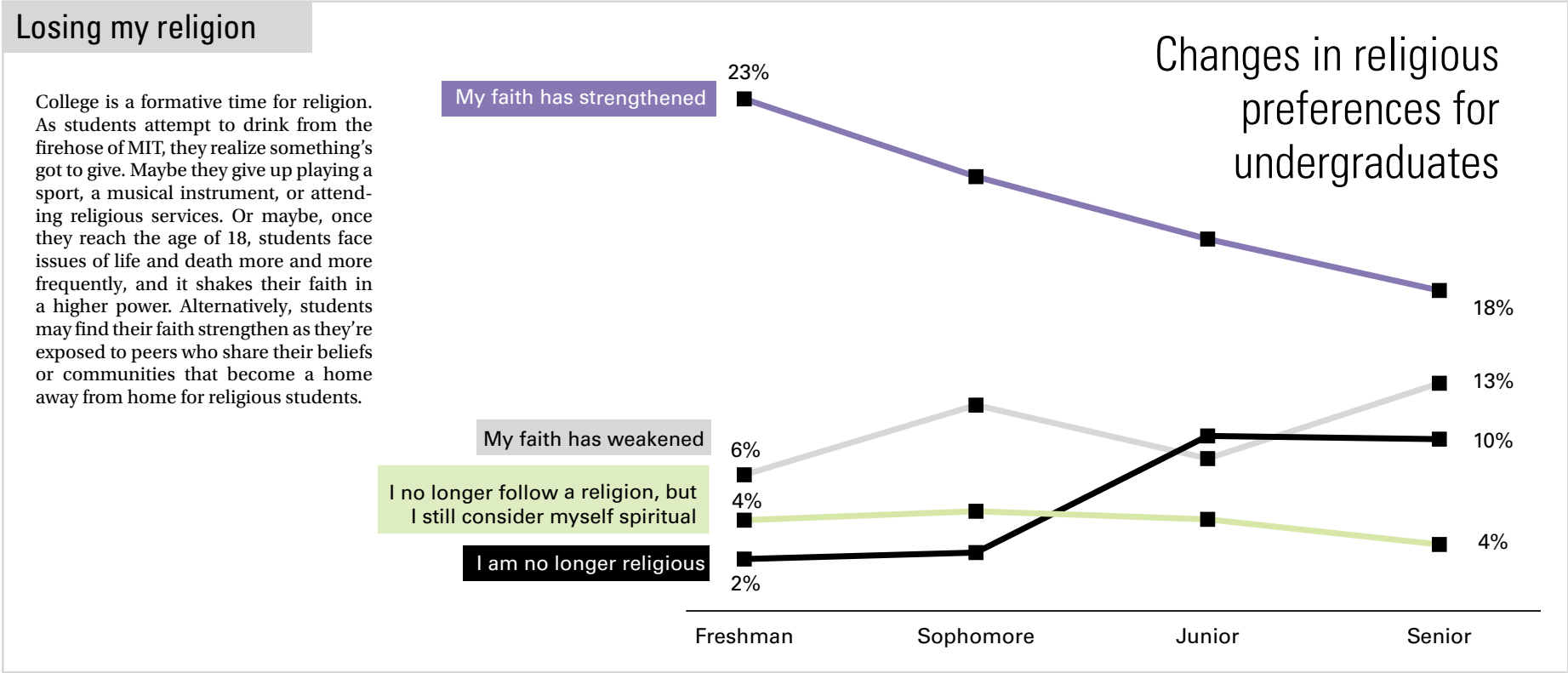
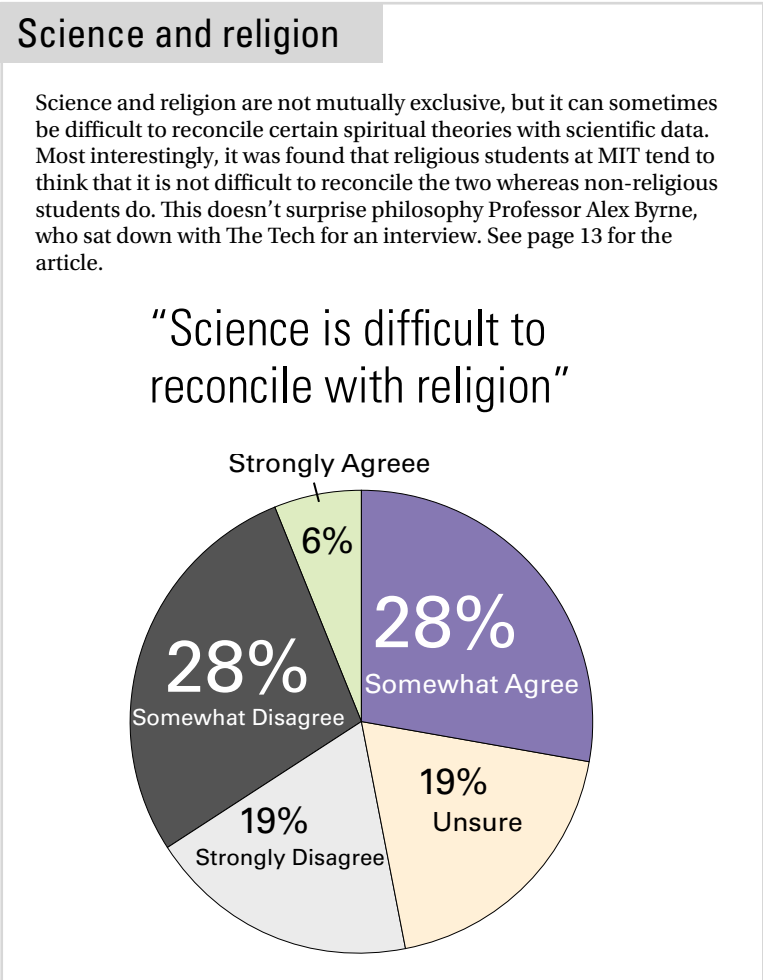
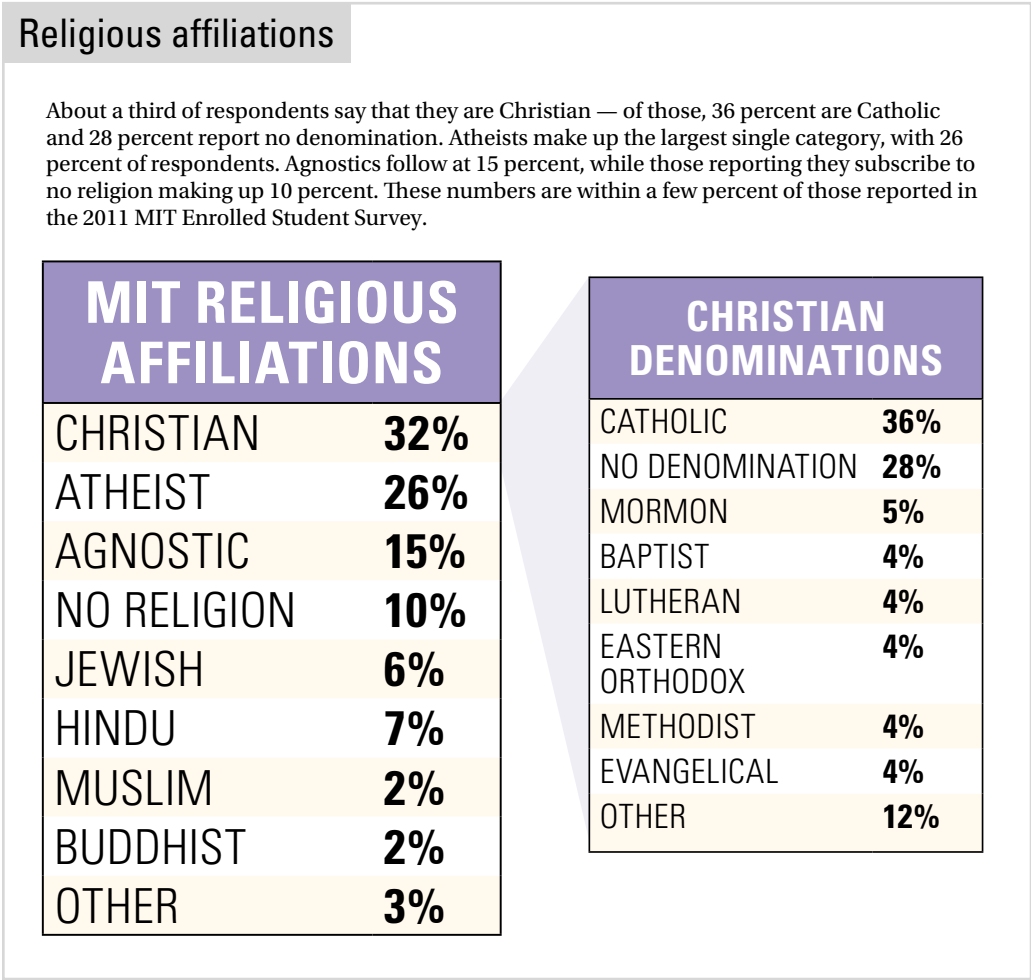


RELIGION HAS A STRONG INFLUENCE

Across all respondents, 28 percent support the death penalty for a person convicted of aggravated murder. As indicated in the charts on the left, the more religion influenced respondents' views on the death penalty, the more likely they did not support the death penalty.



50% never pray | 31% pray at least weekly



By Jessica Pourian
EDITOR IN CHIEF

Responses ranged from concerns about the religion survey itself, to stories about religious discrimination at the Institute, and thoughts about how MIT can improve its spiritual life. Opinions varied drastically for every topic; we had feedback from the most militant of atheists to the most devout theists about the state of

We tried to capture the essence of the community's feedback in these comments. Read on for more!

I find fuller meaning and joy in my research and studies appreciating it as a God-given opportunity to peek at His amazing wisdom and beauty; seeing good ideas and sparks of insight during my research makes me more in awe of God. Research, study, and teaching are great ways of worshiping God.

Can science be reconciled with religion?

Religion and science complement each other; they address separate questions

By Ryan Normandin
STAFF COLUMNIST

Asking whether or not religion conflicts with science is too broad a question. Of course there are certain religions that conflict with science; Christian fundamentalism, with its claims of God creating the world in six days and the human race springing from a woman tempted by a talking snake, obviously conflicts with well-established science. Yet there are many other religions which do not conflict with science. As a Catholic, I have not once encountered a belief held by the Church that contradicts anything that I have learned during my time in high school or time here as a physics major at MIT.

Some might find this surprising; I was once chatting with a friend who told me that she could never be Catholic because she "believed in evolution." The Catholic Church subscribes to the theory of evolution, as do most Jews and some sects of Islam. One of the most common reasons individuals believe that science and a given religion conflict is that they have misunderstood the beliefs of that religion. This makes sense, as many popular movies and television shows have portrayed all Christians, regardless of sect, as ignorant bible-thumpers who believe that people rode dinosaurs.

The Catholic Church subscribes to the theory of evolution, as do most Jews.

Of course these are caricatures, and obviously not representative, but when it's all people have to go off of, they may assume that it is at least a first-order approximation of what Christians really believe. As such, I encourage individuals to gain a more complete understanding of what different religious beliefs actually entail before assuming that, by nature of being religious, religion conflicts with science.

Thus the answer to the question posed in the first paragraph is trivial: it depends on which religion you're referring to. The more interesting and nuanced question is whether having any belief system which can be neither confirmed nor refuted by science is inherently in conflict with the scientific method and the body of knowledge we've amassed. The answer to this question, as you will see, is that having such a belief system is not a necessary and sufficient condition for being in conflict with science.

Let me first point out that religion and science have many similarities. Unless God pops down from Heaven to kindly prove his existence for us, religious beliefs cannot be proven to be true; they are taken on faith. Some scientists may find this laughable, but science has the identical

characteristic, which is also its greatest strength. By and large, scientific theories can never be proven to be correct. Evidence can be gathered in support of it, but we can never know with 100 percent certainty if gravity actually works the way we think. Sure, general relativity describes it well, but as so many professors emphasize here, our scientific theories are models. We continuously refine those models as new information comes to light. Less commonly known is that religions do the same thing. The beliefs of a religion are re-examined and refined as time passes and new knowledge is attained. In fact, some religions, such as Catholicism, gather groups of its members periodically for that explicit purpose.

Science is concerned with describing and predicting the universe; religion with explaining it.

While both disciplines gather evidence, it might be argued by some that the evidence in science is a lot more solid than that in religion. After all, science has the ability to measure things quantitatively, but religion cannot measure how much of the “God Field” is manifest in a church. Even so, religions have also gathered evidence; it’s just a different kind, taking the form of texts, claims of miracles, and other personal evidence. Some find that evidence compelling enough to form a belief, others do not. Is that so different from science? Today, we have extensive measurements of gravity, but everyone disagrees on what gravity is. Recent research suggests it might be an entropic force while others support the “brane theory” of gravity. Quantum mechanics, a field that dates back to the early 1900s, is still argued about today. Does the wave function actually collapse, or are there an infinite number of universes, one for each possible state as Many-Worlds claims? It is not the evidence in science or religion that is in question — it’s what people make of it. It’s the interpretations that split them into Jews and Muslims, or subscribers to the Copenhagen Interpretation and believers of the Many-Worlds hypothesis. Each interpretation of the religious evidence throughout history that has spurned the creation of so many different sets of beliefs is a unique faith. Similarly, each interpretation of quantum mechanics is nothing more, and nothing less, than a faith.

What of so-called “miracles”? Many religions use such events as evidence to support religious claims, yet walking on water is not supported by science. But science has not presented any evidence in direct conflict to the claim that an all-powerful being could not change the rules locally or utilize some force that we do not yet understand to perform the miracle. This is in

important contrast to claims that are held onto despite being in direct conflict with science and capable of being proved impossible, such as the creation of the world a few thousand years ago. Miracles are an example of one of the elements of religion that science has nothing to say about, just like religion has nothing to say about general relativity. Science is apathetic to whether or not a supreme being could bend the laws of physics locally and religion is apathetic to whether or not general relativity is the best description of gravity.

A final argument that might be made by those who believe that science and religion conflict under the nuanced definition I provided in the beginning would be that, as religion lacks certain aspects of the scientific method, it does not hold the same weight as science. Yet this claim is based on the assumption that the scientific method is in some way superior to the “religious method,” which I will define as gathering evidence, reflecting personally, and developing an interpretation of that evidence. The scientific method is as superior to the religious method as a recipe for cookies is to one for brownies; they have two completely different goals, which will of course have different methodologies. It just doesn’t make sense to apply the same process to both fields. The religious method is relatively useless in science, and the scientific method is relatively useless in religion. As Einstein said, “If you judge a fish by its ability to climb a tree, it will live its whole life believing it’s stupid.” So let’s judge each of these fields by the distinct criteria that apply to them.

**Science is
apathetic to
whether a
supreme being
could bend the
laws of physics.**

Religion and science do not contradict each other. They are both systems which produce theories that some people will have faith in, albeit through different methodologies. Science is concerned with describing and predicting the universe; religion is concerned with explaining it. Believing in some religion is not inherently a sufficient condition to be in conflict with science. Only when religion makes claims that are obviously refutable by well-established scientific evidence is it ever in conflict with science, but that's the trivial, uninteresting case. In fact, many believe that science and religion complement each other well. Each covers one domain and largely stays out of the other; when you put them together, you have a solid "Theory of Everything." No one can say with certainty whether or not a God exists; as long as science cannot disprove the possibility, the two disciplines will continue to complement each other well.

History is clear: religion slows science and understanding

By Haldun Anil
STAFF COLUMNIST

The Tech's religion survey covered a range of questions about the religious views of MIT students; everything from "How religious are you?" to "How religious is MIT?" and "Is religion difficult to reconcile with science?" Good questions all, but it is the last that is the most interesting.

When asked to rate their own level of religious belief, 43 percent of undergraduates said they were completely not religious.

Let's get a baseline from the numbers. When asked to rate their own level of religious belief, on a scale from 1 (not religious) to 10 (very religious), 43 percent of undergraduates picked 1, saying they were completely not religious. Only seven percent chose 10, saying they very devoted to their religious beliefs. However, when asked what they thought of the religious views of all of campus, only four percent chose 1, while less than one percent chose 10.

Students were also asked to respond to rate their agreement with the statement “it is difficult to reconcile science with religion”, with the option to strongly agree, somewhat agree, somewhat disagree, strongly disagree, or say that they were unsure. Responses were evenly divided: 48 percent of undergraduates said they at least disagreed, while 44 percent agreed it was difficult to reconcile science and religion.

I side with the latter camp. While I consider myself unreligious, I have nothing but respect for those who, on a personal level, sincerely care for their beliefs and wish to uphold them. And yet, history has shown us time and again that when you mix religion with science, you obtain results far from optimal.

Examples from history of how religious institutions slowed the progress of science abound — sometimes acting as an impediment, other times halting it entirely. One need only remember the condemnation the Catholic Church issued upon Galileo and Copernicus, whose work on the motion of the planets was seen to challenge biblical passages, such as Psalms 104:5: “He set the earth on its foundations; it can never be moved.”

Of course, we do not live in 16th century Europe, so it is tempting to think that such examples no longer hold; that our cultures would continuously improve. Unfortunately, even today we see signs of undue religious influence on scientific advances.

I can speak from personal experience from my time in Turkey. During my junior year of high school, my biology class, which had genetics as part of the curriculum, also included a brief presentation of ideas posited by Charles Darwin. My successors will not see that — starting this year, Charles Darwin has been removed from the curriculum. Turkey's Ministry of Education, part of a government that has taken a liking to calling itself "Moderately Islamic," issued that edict.

Evolution, as proven by science, is not a thing we can choose to believe in or not. It is not a question of faith or devotion. Evolution is a naturally occurring cycle that will continue to happen despite what is written in scripture. This is where the fundamental issue between science and religion poses itself.

In the past, the quest to give meaning to some of the universe's unexplained phenomena through religion was acceptable as our knowledge of how we got here was severely limited and we craved for meaning. Today, while there still is a lot to discover, our knowledge of the mechanics of evolution and cosmology allows us to respond to many questions that we were unable to answer in the past. As we learn more and get better at answering the big questions, science asserts itself as the dominant way of doing so. However, when the answers we get conflict with the teachings of religion, we find ourselves at an impasse. Because neither side will ever be willing to give in, the reconciliation of science with religion becomes impossible. At this point, the impasse quickly turns into a game with a single rule: the one who can assert superiority in its claim against the other wins.

Throughout history, religion has proven itself ready to block scientific advancement if it meant undermining of its own teachings. While this says nothing about the personal virtues and benefits of religion, religious institutions have always had more pragmatic approaches to science. From what I've seen, religious teachings don't push one to think analytically, to challenge ideas, and to incite progress. It is instead the personal qualities of those who, despite being compliant with their faith, come up with novel and earth-shattering ideas to transform the world and our understanding of everything that surrounds us. This can only be achieved by education, critical thinking, and knowledge, qualities that our Institute embodies. The effect of the four years that students spend at MIT demonstrates that: while two percent of freshmen admit to no longer being religious since their arrival at MIT, this number climbs to three percent for sophomores, jumps to eight percent for juniors, and leaps again to 10 percent for seniors.

We cannot choose to ignore evolution, as proven by science; it will occur regardless of what scripture says. Evolution is not a question of faith or devotion.

Science is discovery, inventions, analysis, challenge, and knowledge. Religion is spirituality, morality, personal virtues, and lifestyles. Reconciling one with the other is a futile attempt as the two do not overlap, but define different domains in one's life. I am certain that the benefits of religion are innumerable to those who practice them; however, the fact remains that religion is a personal experience that will exist so long as people have need for it. Science, on the other hand, is not a matter of belief; it is a matter of fact.

Maseeh lecture series merges arts and sciences

Events include a Master’s Tea, science lecture, and a proposed public art exhibition

Maseeh, from Page 1

reer experiences.”

“As a dancer myself, I felt like this was something I would be interested in pursuing sometime. ... It was interesting to realize how creative people can be and what they can do to connect with others,” added Larissa J. Senatus ’15.

“Lots of Maseeh students, it turns out, are dancers at MIT, and I think everyone enjoyed John’s creative work connecting dance to science,” said Eli Kintisch, who organized Expressions. Kintisch is a Knight Sci-

ence Journalism Fellow at MIT and Maseeh’s Resident Scholar.

The second event in the series was Maggie Koerth-Baker’s lecture “Shedding Light, Online,” held on April 4. Koerth-Baker, a science editor for the popular blogging site BoingBoing.net, spoke about how blogging and interacting with a responsive audience shaped her new book on the future of American energy, *Before the Lights Go Out*.

The last event was an art reception — “To Extremes: Public Art in a Changing World.” To Extremes was a juried exhibition of proposed public

artworks exploring climate change. The jury consisted of nine professional artists and designers. Attended by around 90 people, this exhibit was on display in Maseeh’s lobby from April 20 to April 29. London-based artist Sam Jury won the first place of \$2,500 for further development of the proposed project for installation at a public site.

Effects on Maseeh Culture

“We believe that Maseeh Hall should be host to visitors to explore new and interesting cultural, academic, and scientific ideas,” said

Kintisch. He hopes themes like art, dance, creativity, and scientists and engineers engaging with the world will be part of the Maseeh culture in the future.

“I think it would be great if Maseeh students could come together and decide what sorts of speakers they would be most interested in, and then we would all work together to invite different people and plan exciting events like this one,” suggested Villa.

Some students, though, express lower expectations for the program. Though Peña supports the idea of

having more of such lectures at Maseeh, he said that these talks are not big enough to have an influence on the dorm’s culture.

“I don’t think the Expressions talks can become that popular given that they are limited to a single residential hall whose culture has no particular attraction to the arts,” said Peña.

“I don’t know how popular it was, considering it was the first time it happened at Maseeh,” noted Senatus, “but I do think they could become very popular if proper advertisement is made in advance.”

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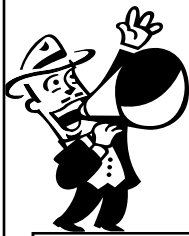
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MacG not yet filled for summer housing

There is good news for those on the summer housing waitlist. 77 people, mostly from MacGregor, have declined their given housing as of Wednesday. The bad news is that the waitlist only includes students who did not get into Senior House, Bexley, or Random, but don't want MacGregor, according to director of housing Dennis J. Collins.

Of the four dorms open for summer housing — MacGregor, Random, Bexley, and Senior House — MacGregor is the only dorm with open space. Random and Bexley are filled to capacity while Senior House is filled to half capacity to leave room for kitchen renovations. The 73 residents living in Senior House will only have one kitchen open during the summer while the rest are being redesigned. Collins said that the dorms open for the summer were selected because of their amenities: Senior House is cat-, smoking-, and handicap-friendly; Bexley is cat- and smoking-friendly; and Random is cat-friendly. All four dorms are cook-for-yourself, meaning they come equipped with full, communal kitchens on each floor. The combined capacity of the dorms is about 530 students.

If MacGregor is not filled to capacity, summer residents will fill in entry by entry, so unused sections can be closed. The final lottery to fill in people from the waitlist will take place on May 14.

—Stan Gill
Derek Chang contributed reporting.



MIT students surveyed a wide range of overseas opportunities at Monday's International Development Career Fair on Monday.

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and performance that consumers are looking for. DisplayWeek assembles the strongest and broadest set of technical leaders in the display industry, in front of attendees representing the largest markets for the display industry. DisplayWeek is the best place to demonstrate advanced display technology, and publicize the value for licensing, selling or funding your technology. Be there when the puck drops June 3 - 8, 2012, at the Boston Convention and Exhibition Center. To exhibit or for more event information, visit: <http://www.displayweek.org>



INNOVATION ZONE "I-Zone"

New at Display Week 2012, the I-Zone will give attendees a glimpse of cutting-edge live demonstrations and prototypes of the display products of tomorrow. Researchers from companies, startups, universities, government labs, and independent research labs will demonstrate their prototypes or other hardware demo units for two days in a dedicated space in the main Exhibit Hall. The "Best Prototype at Display Week," to be selected by the I-Zone Committee, will be announced in Information Display magazine.

INTERVIEW

Is Schrödinger's cat dead?

The Tech sits down with student composer Dustin R. Katzin '12 after the MITSO premiere of his physics-inspired piece

By Bogdan Fedeles
STAFF WRITER

Dustin R. Katzin '12 is a quintessential MIT renaissance scholar, whose impressively diverse achievements are a testament to the remarkable breadth of MIT education and simultaneously set stratospheric standards for the rest of us. A scientist and artist in one, in the four short years of college, Dustin has managed not only to complete a double major in physics and mathematics, dazzle his peers with musical artistry and stay involved in myriad other extracurriculars, but also to have fun while doing it. His crowning artistic achievement is *Schrödinger's Cat: a Musical Journey into the Strange World of Quantum Mechanics*, a programmatic orchestral work that was premiered by MITSO last Friday. I sat down with Dustin to talk about music and life at MIT.

The Tech: Now that you're graduating, how would you rate your overall MIT experience and what are your favorite moments?

Dustin Katzin: This was definitely the perfect place for me because they specialize towards math and physics and science in general. As for favorite moments, the concert from Friday is definitely up there.

TT: Any particular classes that you enjoyed?

'I've been exploring ways in which physics can influence music and serve as an inspiration for music.'

DK: I really enjoyed a lot of the physics classes, general relativity, the whole quantum sequence. Actually, it was really funny

— at the end of the last quantum class 8.04, they hacked the last lecture. ... They made one of the lecturer's seats into a throne, it was like getting the whole MIT experience.

TT: Speaking of physics, what do physics and music have in common? Which one came first?

DK: Well, the Big Bang happened. So I think physics came first, and if you want to analyze the waves, music fundamentally is physics. The thing that's interesting about that is that your ear can decompose sound waves so when you listen you can pick out the trumpet and the strings. That's called Fourier analysis. And you're doing that before you can add, so you're already doing calculus, which is pretty awesome! There's the flip side where I've been exploring

'The original idea was the coin flip. Schrödinger's cat, coin flip, lives or dies, that was the idea.'

ways in which physics can influence music and serve as an inspiration for music. There's definitely also a big mathematical component in terms of what sounds good and what doesn't; it comes from combinations of chords and adding up frequencies. There's a class here where you use matrices and other mathematical tools to guide your composition, but I've found that the more math you add in artificially, the worse it sounds. To me, fundamentally, music has to sound good.

TT: Let's talk about your piece *Schrödinger's Cat*. How did this piece come about? Where did you get the idea about writing a piece about quantum physics?

DK: I took a class on 20th century composition and on the last day in lecture we listened to music from the early 20th century all the way to now; some of it had random elements like using dart board and throwing darts to decide which note to

play. This seemed very complicated. I'm not really sure how the idea formed, but the motivation was that I liked the idea of randomness. Again, the point of music for me is not to be esoteric that you have to decode it but pretty apparent as you're hearing it. The original idea was the coin flip. Schrödinger's Cat, coin flip, lives or dies, that was the idea. I was: "Wow, I have to do this." I was floored the whole day. I started putting down some initial notes. The cat has to be in the box and I had two motifs that I wanted to mix together. But how did the cat get in the box in the first place? It's going to be a dramatic piece, so let's have a chase sequence. I didn't know it was going to be Heisenberg kidnapping the cat until a lot later.

TT: How did you come up with the instruments for the main theme — English horn for the cat and bass clarinet for Heisenberg?

DK: Heisenberg first was on tuba. One of the difficulties about composing now is that most of it is done on the computer so it sounds a lot different [than in real life]. It sounded really nice on the computer, but I didn't realize how loud the tuba actually is. Towards the later stages I met with the composers on staff here and we talked about ways to flesh out the ideas that I had, which included moving that theme to the bass clarinet, which works well for this cartoon depiction of Heisenberg. As for the cat on the English horn, that wasn't the original way that motif started. The very first music I had was the beginning of "the cat lives" — the happy ending — with all the strings playing. Then I decided that should also open the piece, to establish that the happy

music is the cat.

TT: How long did it take to get to the final version?

DK: It depends what you mean by a final version. There still isn't a final version. There were some changes we had to put in by hand along the way. The idea came in December of 2009, so the whole process has been about 2.5 years from start to finish. The concert was a really good cap to this.

TT: Was the coin flip real in the concert?

DK: Yes. We tried to find a way to play the happy ending as an encore if the sad ending came up. I'm not sure what would have happened if it was the other way. We had to do justice to the concept. Every day that he flipped the coin in practice it was tails, so I think it was just destined for the cat to die.

TT: It's no secret that young audiences don't enjoy classical music as much, especially the contemporary music. As a composer, why do you think that is, and what do you think you can do about that?

'If Steven Spielberg came up to me and asked me to do a movie, I would drop everything.'

DK: For why that is, I think it's been a long trend of moving to simpler music with simple chord progressions. This gives the audience the freedom to just enjoy the lyrics. I'm not saying one's worse or better than the other. On what to do about that ... well, I'm not going to be marketing myself to compete with Justin Bieber. I want my music to make a statement, like making

Katzin, Page 24

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TIFFANY IRA HUANG—THE TECH



SARAH RITTER—THE TECH



TIFFANY IRA HUANG—THE TECH

Bridge testing for 1.013 (Civil Engineering Design Project) took place in Lobby 7 at noon this Wednesday. Each of six bridges were required to hold 2,500 pounds without failure. Each group was also required to demonstrate that their bridge could safely hold the weight of all team members combined. **Also on Wednesday, teams competed in the qualifying round of this year's 2.007 competition.** Each team's robot earned points for completing a set of tasks.



SARAH RITTER—THE TECH

1. Scott Landers '12 loads his team's bridge. Inspired by Calatrava's designs, their team took on the challenge of resolving the huge torsion forces that an asymmetrical design creates. **2. Rebecca Heywood '12** poses in front of her group's PVC bridge. **3. (Left to right)** Catherine John-

son '12, Andrew Pierson '12, Meredith Lis '12, Tiffany Cheng '12, and Reece Otsuka '12 with their 2,500-pound-loaded bridge. **4. Civil and Environmental Engineering seniors** (left to right) Abhradeep Sarkar, Michael Chen, Julia Hopkins, John Lim, and Nicky Soane hung weights off of

a hanging chain to find the ideal arch geometry for their bridge. Bridge testing for 1.013 took place in Lobby 7 at noon this Wednesday. Each bridge was required to hold 2,500 pounds without failure. Each group was also required to demonstrate that their bridge could safely hold the weight of all

team members combined. **5. A robot flings a mass** into the air as part of a task during the 2.007 competition Wednesday. **6. A robot scores points** by hitting a lever to complete a task. **7. Kelsey S. Brigrance '12 weighs two robots** on the scales of justice after their round resulted in a tie. In

the event that two robots scored the same number of points, the one that weighed less would win. **8. Jonathan E. Rea '14 pilots his robot "Jack."** One of the tasks of the 2.007 competition this year was to raise a mass in the air, and some robots, like Jack did this through a ladder mechanism.



TIFFANY IRA HUANG—THE TECH



SARAH RITTER—THE TECH



TIFFANY IRA HUANG—THE TECH



SARAH RITTER—THE TECH

MIT hosts National Taekwondo Championship

By Casey Denham
TEAM REPRESENTATIVE

The National Taekwondo Collegiate Championships were hosted by MIT Sport Taekwondo on April 7 and 8 with a record breaking 601 competitors. Although it was a difficult task to organize such a large tournament, the team, led by head coach Dan Chuang and captains Seth "Matt" Weinberg '12, Erika Lee '12, and Tara P. Sarathi '12, had a strong showing and received second in the novice and championship divisions, as well as second place overall with a total of 49 points.

Along with winning first place in Division I and the ECTC Cup, Lee and Weinberg took home MVP awards.

In the novice, or color belt, division, MIT placed second with a total of 37 points. In the yellow belt divisions, Katie Biegel '15 won gold in sparring, Sarah J. Bricault G won bronze in forms, and Danillo J. Ondina '14 also won third in forms, while in the green belt divisions, Latif Alam '12 won gold in sparring and Diego A. Giraldez '15 won bronze in sparring and silver in forms. For blue belts, Alvin Chen '11 placed third in forms, Sharon Tam '11 placed third in forms and silver in sparring, Maria Z. Tou '14 placed silver in forms, Shirley Tsang '14 placed gold in forms, Tam T. Nguyen '13 placed gold in forms.

MIT performed above and beyond in the red belt divisions, with Lori Ling G placing first in forms, Phillip H. Daniel '13 placing silver in forms, Teresa "Ty" Lin '12 placing silver in forms, Hilary T. Monaco '12 placing gold in forms, Angela N. Chang G placing bronze in sparring, Ryan A. Rosario '12 placing bronze in sparring, and Karine T. Yuki '13 placing gold in sparring.

In the championship, or black belt, division, the Engineers placed second with a total of 12 points. Lee placed first in forms and third in sparring and Kristina L. Lozoya '13 placed third in sparring. MIT had a significant alum turnout at the tournament, which is open to athletes who graduated in 2011, including medalists Jason Uh '11, who placed bronze in forms, Chris M. Williams M.Eng '11, who placed gold in forms, and Rebecca Hung, who placed gold in forms '11. Williams and Hung also took bronze in pairs in the poomsae team trials event. Alumni Rene Chen '07 made the Collegiate National Team and was selected as Female Athlete of the Year, while placing gold in individual and triples, and silver in pairs during the poomsae team trials.

Two short weeks after Nationals, the team was on the road to RPI in New York to compete in the final Eastern Collegiate Taekwondo Conference (ECTC) tournament of the year and compete for the much coveted ECTC Cup. Although it was a small tournament, the Engineers kept the fighting spirit throughout the day, earning a total of 619 points, compared to rival Cornell's 496. This led to MIT also winning the ECTC Championship Cup, with a season total of 1,815 points.

The team's hard work this se-

mester on poomsae, or forms, really paid off, with double, triple, or quadruple placings in many divisions and a total of 211 points. For green belt forms, Bricault and Alam both placed third in their divisions, while every blue belt placed, with Tsang placing second, Tou plac-

berg finished off a great season by both placing second.

MIT also proved to be a tough competitor in sparring. Men's A1 (Weinberg, Edgardo "Eddie" Farias '15, Aziz Abdellahi G) placed third, finishing off a very successful season. The real standout performance

es. Women's C1 (Bricault, Casey L. Denham '15, and Jessica J. Yang '15) placed third for the second straight competition. Women's C2 (Biegel and Tiffany Chen G) and Men's C3 (Steven Fine '15 and Cecilio Aponte '15) both reached the quarterfinals. Along with winning first place



Co-captain Tara P. Sarathi '12 scores a crescent kick on her opponent at the 2012 National Collegiate Taekwondo Championships held at MIT April 7 and 8.

ing fourth, Issac Fenta '14 placing first, and Victor Nevarez '12 placing fourth. As at Nationals, our red belts really shined, with women sweeping the forms division, as Mengfei Yang, Chang, Nguyen, and Monaco, received first through fourth respectively. On the men's side, Daniel placed first, Maksim Stepanenko '12 placed second, and Rosario placed fourth. Black belts Lee and Wein-

of the day was women's A1 (Lee, Sarathi, Michelle W. Chen '14) who won gold against tough teams they had worked all season to beat. Men's B teams double placed, with B1 (Rosario, Stepaneko, Daniel) winning gold and B2 (Fenta, Nevarez, and George T. Cheng '14) winning silver. Women's B1 (Ling, Chang, and Tiffany A. Chen '12) also won silver after a series of tough match-

in Division I and the ECTC Cup, Lee and Weinberg took home both MVP awards. Although it was a tiring series of tournaments, the team held it together to perform their best. Every member contributed, whether in the rings or on the sidelines cheering. These tournaments ended a strong season for the Engineers and next year looks to be just as promising.

Hamels admits to hitting rookie Harper with pitch

Phillies' pitcher Cole Hamels earns a five game suspension and mars his reputation

By J. Austin Osborne

Baseball is a game of unwritten rules. Don't steal bases when you have a big lead. Don't bunt to break up a no-hitter. Retaliate when one of your teammates is hit by a pitch. It is understood that once you get to The Show, you abide by these rules. There is no need to speak of them to the media, to your teammates, or to anyone else, for that matter. This is what made Cole Hamels' recent admission to intentionally plunking rookie phenom Bryce Harper all the more alarming.

In the first inning of Philadelphia's 9-3 win against the Washington Nationals on May 6, Hamels fired a fastball at Harper, hitting him in the small of the back. Nothing was said, and no one reacted. When Hamels came up to bat in the third inning, he was hit by Nationals pitcher Jordan Zimmerman. Once again, nothing was said, and Hamels took his base. This common baseball occurrence became controversial after the game when Hamels candidly admitted "I was trying to hit him. I wanted to welcome him to the major leagues."

Bryce Harper is one of the most highly touted, but sometimes overly cocky, prospects in recent memory.

He has been in the national spotlight since he was on the cover of *Sports Illustrated* at the age of 17, but baseball is just as much about earning and giving respect as it is about personal skill. Whether or not you feel that a seasoned veteran like Hamels should have hit a rookie in his eighth major league game, the incident would have gone unno-

Hamels candidly admitted 'I was trying to hit him. I wanted to welcome him to the major leagues.'

ticed had he not said anything. This is where Hamels made his biggest mistake. He has become the target of much criticism around the league and earned himself a five-game suspension handed down from Major League Baseball. He has been called “fake tough” and “braggadocious.” Cole Hamels is hurting his team by missing a potentially crucial start in this young season, and he is hurting his previously sparkling reputation. In today’s game, which is stained by performance enhancing drugs and dishonesty, some may appreciate Hamels’ candid remarks, but sometimes unwritten rules are left unwritten for a reason.

UPCOMING HOME EVENTS

Friday, May 11

Men's Track and Field NEICAAA Championship *10 a.m., Steinbrenner Stadium*

Women's Track and Field NEICAAA Championship 11 a.m., Steinbrenner Stadium

Saturday, May 12

Men's Track and Field NEICAAA Championship 10 a.m., Steinbrenner Stadium

Women's Track and Field NEICAA Championship 11 a.m., Steinbrenner Stadium

Men's rugby reinvented

Team hopes to play in Division II next year

By Thomas A. Villalon Jr.
TEAM REPRESENTATIVE

You don't often hear rugby associated with MIT, but for the 30 players on the MIT Men's

TRUGBY team, it's something that brings them together. Started in 1949, the club is one of the oldest in Boston and

the founding core of Boston's Super League club. A mixture of different countries, languages, and styles of play, the team has pulled together, seeking to play at their top level at all times. For the past four months, men's rugby has been practicing and preparing to defend the Division III NERFU (New England Rugby Football Union) Cup. Whether playing in snow, sleet, or sun, the team knows that this is their chance to retain their championship and prove that they can play Division II rugby.

Two years ago, the club was much different. Almost relegated to Division IV, the club came

under the leadership of Coach Sean Christie who changed the way MIT played its game, and the team has been improving since. The next two seasons the club finished second in Division III and won the NERFU Cup. Now with a faster, more aggressive, and more intense style of play, MIT's Men's Rugby has reinvented itself and looks forward to a chance to defend their title.

MIT has posted a 4-1 record against Division II teams.

The result of these continuing changes is visible in the rugby team's current record. This spring season alone, MIT has posted a 4-1 record against Division II teams with strong victories against Charles River (37-0) and Portland (50-26), the club has shown itself to be a threat to higher level teams. Additionally, MIT has scrapped

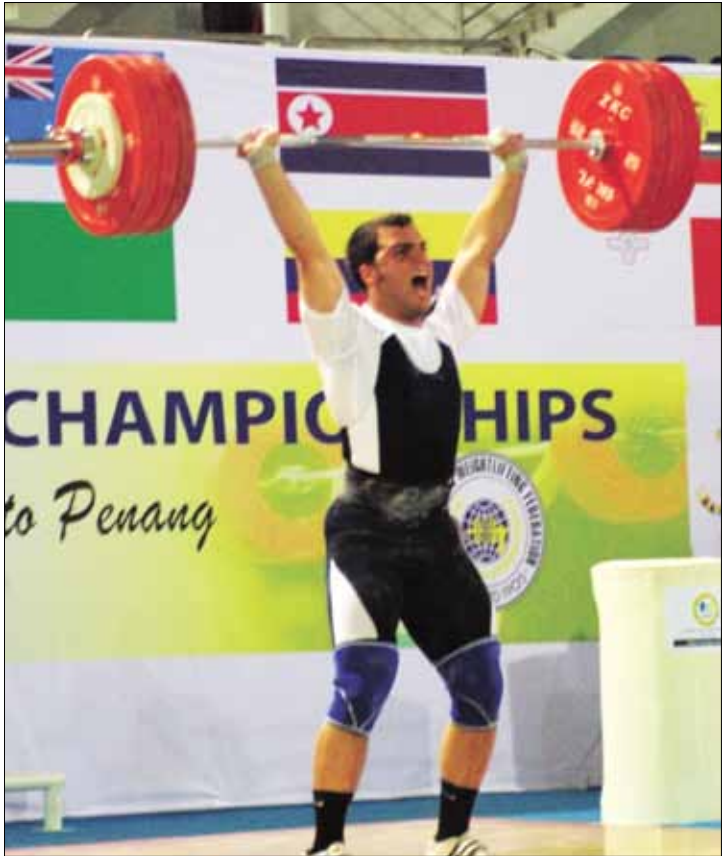
some tough wins against Old Gold (19-5) and North Shore (27-15), proving that they are ready for the challenge of Division II. However, with its sole loss against Providence (9-46), MIT was reminded that the club has room to improve.

Due to these recent successes, they have a positive outlook. In a conversation with team president Mike P. Byrne G, he noted that the team has "a great mix of talented younger guys and more experienced older guys [in] the club." He did note, though, that success will not occur without challenges. Most particularly is "attracting new undergrad and grad students to the club" as "[the team] faces a lot of competition from football, soccer, and other sports, particularly for undergrads."

In spite of these challenges, the club looks forward to a bright future. Fuelled by the dedication of the players and Coach Christie's leadership, the club is ready for the games ahead and ready for the chance to break into Division II.



The MIT Men's Rugby team normally plays in the Division III New England club division, but they currently have a 4-1 record against Division II teams.



Nackoul hopes to be at 2016 Olympics in Rio De Janeiro

Mike lives for the feeling he gets walking up the platform, and knowing that it is just him and the

Mike feels that it is his discipline that is most often tested by his training, and he strives not to let himself become overwhelmed. "If you just keep pushing forward

Mike's favorite song is "Jungle Boogie" by Kool and the Gang. He likes to get funky, and you can expect to see Mike representing the USA and MIT at the 2016 Olympics!



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